

Date: Thursday, 15/11/2007 9:08:04 AM
 User: Linda Lacelle

Process Sheet

Customer : CU-DAR001 Dart Helicopters Services	Drawing Name : MID TUBE ASSEMBLY
Job Number : 35749	
Estimate Number : 10469	
P.O. Number : N/A	Part Number : D3391023
This Issue : 15/11/2007 S.O. No. : N/A	Drawing Number : D3391 REV F
Prsht Rev. : NC	Project Number : N/A
First Issue : N/A Type : LANDING GEAR	Drawing Revision : N/A
Previous Run : 32237	Material : N/A
Written By : _____	Due Date : 19/11/2007 Qty: 1 Um: Each
Checked & Approved By : _____	
Comment : Est. A 05.10.20 New Issue KJ/EC	
Est. B 06.02.10 ECN773 dwg rev.D EC	
est C 07.03.20 rev F dwg EC	
est D 07.03.28 re-format EC	

Additional Product

Job Number:



Seq. #:	Machine Or Operation:	Description :
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1.0	D25001100	Skidtube Extrusion
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)
 SKIDTUBE EXTRUSION

Pick:

Qty	Part Number	Description	Batch
1	D2500-1-100	Extrusion	B24593

DP 7-11-15

2.0	D3391021	Fwd Tube Assembly
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Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

Fwd Tube Assembly

Batch:

B33634

DP

7-11-15

3.0	LANDING GEAR 1	LANDING GEAR RESOURCE 1
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**Comment:** LANDING GEAR RESOURCE 1

1-Cut tube to finish length as per Dwg D3391

2-Identify as D3391-023

3-Drill pilot holes using DT8796 (Do not drill "B" holes) and drill only 1 fwd saddle hole on one side only as per Dwg D3391

4-Open float bag holes 0.257" as per Dwg D3391

5-C'sink float bag holes as per Dwg D3391

6-Open remaining holes to Ø0.375" except for fwd saddle hole of detail "J"

DP 7-11-15

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 15/11/2007 9:08:04 AM
User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: MID TUBE ASSEMBLY

Job Number: 35749

Part Number: D3391023

Job Number:



Seq. #:

Machine Or Operation:

Description :

7-Remove .030" from Fwd indexing Ridge as per Dwg D3391

8-Remove indexing ridge on Fwd & Aft end of skidtube as per Dwg D3391

9-Deburr

10-Drill #30 pilot holes using wearplate Jig DT8217 Identify Ø0.250" holes with paint marker,

11-Open wearplate holes of D3391-023 assembly detail section G-G to Ø0.250" (14 holes) as per Dwg D3391 and 2 holes in section Detail "J", do not open wearplate holes of section "J"

12-Open wearplate holes of D3391-023 assembly detail section H-H to Ø0.257" and c'sink (20 holes) as per Dwg D3391

13-Open .375" holes to .438" ***do not open fwd saddle holes***

14-Locate D3391-021 in D3391-023 at 9.00" (see view z-z)

15- Transfer drill one fwd saddle hole only to .188" dia, transfer drill all remaining fwd saddle holes using DT 8149 locating from previously drill .188" dia hole, using t-pins and clicos to ensure perfect allingment, open up previously tranfer drilled pilot holes in D3391-023/-021 to 0.438" dia. in D3391-021

16- Transfer drill 2 wearplate holes into D3391-021 using DT8217, locating from two previously drilled holes, drill remaining wearplate holes into D3391-021.

17- Locating from two fwd wearplate holes drillol remaining 6 wearplte holes in D3391-021 using DT8937

18- Open 2 fwd wearplate holes in D3391-023 to .250" dia.

19- Open 12 wearplate holes in D3391-021 to 0.257" dia.

20-Deburr and blow out all chips from inside tube

4.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

5.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



Comment: HAND FINISHING RESOURCE #1

Chemical Conversion Coat as per QSI 005 4.1

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 15/11/2007 9:08:04 AM
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Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: MID TUBE ASSEMBLY

Job Number: 35749

Part Number: D3391023

Job Number:



Seq. #:

Machine Or Operation:

Description :

6.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

BE 07/11/15

7.0

D33891

Web



Comment: Qty.: 1.0000 Each(s)/Unit Total : 1.0000 Each(s)

WEB

Pick:

Qty

Part Number

Description

Batch

1

D3389-1

Web

33657

A/R

Sikaflex-241/-291

105488

Sikaflex expire date:

8-7-1

Start: 7-11-15 Time: 4:12

Finish: 7-11-16 Time: 7:30 AM

SL 7-11-15

8.0

LANDING GEAR 1

LANDING GEAR RESOURCE 1



Comment: LANDING GEAR RESOURCE 1

2-Bond web in place as per Dwg D3391 & QSI 015.

Adhere for 12 hours)

SL 7-11-15

9.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

JA-11-16

10.0

POWDER COATING

POWDER COATING



Comment: POWDER COATING

Powder Coat White Gloss (Ref: 4.3.5.1) as per QSI 005 4.3

M 105914

BR 07-11-16

11.0

QC3

INSPECT POWDER COAT/CHEMICAL CONVERSION



Comment: INSPECT POWDER COAT/CHEMICAL CONVERSION

M 07/11/16 (IX)

12.0

NAS1330C3KB116

Insert



Comment: Qty.: 20.0000 Each(s)/Unit Total : 20.0000 Each(s)

Insert

Pick:

Qty

Part Number

Description

Batch

20

NAS1330C3KB116

Insert

M 104575

07/11/16 (IX)

M 07/11/16

W/O:		WORK ORDER CHANGES						
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes ☐ No ☒ DQA: PD Date: 07/10/19
 QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Date: Thursday, 15/11/2007 9:08:04 AM
User: Linda Lacelle

Process Sheet

Customer: CU-DAR001 Dart Helicopters Services

Drawing Name: MID TUBE ASSEMBLY

Job Number: 35749

Part Number: D3391023

Job Number:



Seq. #:

Machine Or Operation:

Description :

13.0

NAS1330C3KB166

INSERT



X

Comment: Qty.: 10.0000 Each(s)/Unit Total: 10.0000 Each(s)

RivnuT

Pick:

Qty Part Number

Description

Batch

10

NAS1330C3KB166

Insert

NAS1330S3KB166

M104819

14.0

HAND FINISHING1

HAND FINISHING RESOURCE #1



(IX)

Comment: HAND FINISHING RESOURCE #1

Install inserts as per dwg D3391

touch-up holes in D3391-021 with alodine

m. h. / R 07/11/16

15.0

QC5

INSPECT WORK TO CURRENT STEP



Comment: INSPECT WORK TO CURRENT STEP

Inspect each insert using DT8821

m. h. / R 07/11/16

(I)

16.0

PACKAGING 1

PACKAGING RESOURCE #1



Comment: PACKAGING RESOURCE #1

Identify and Stock

Location: _____

PPP 33974

17.0

QC21

FINAL INSPECTION/W/O RELEASE



Comment: FINAL INSPECTION/W/O RELEASE

20/11/19

Job Completion



u 27.11.17

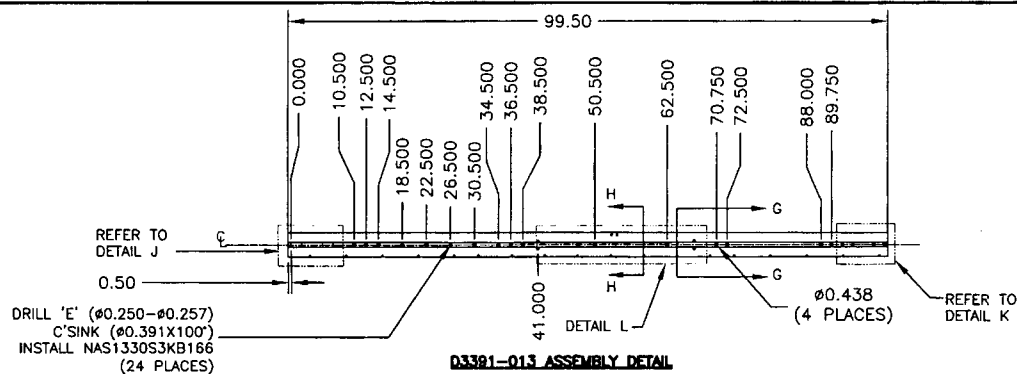
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DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

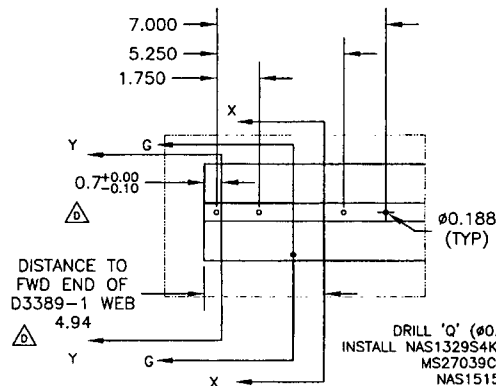
QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

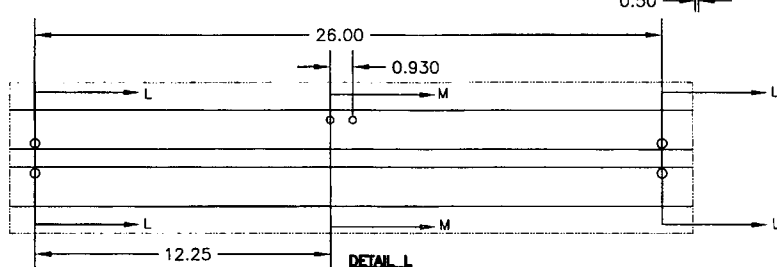


D3391-013 ASSEMBLY DETAIL

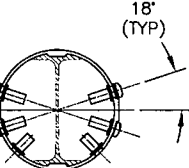


DETAIL J
(SCALE 1:5)

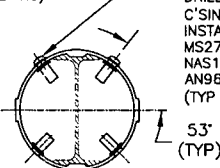
DRILL 'Q' (#0.332-#0.338)
INSTALL NAS1329S4KB140 INSERT
MS27039C4-08 SCREW
NAS1515H4L WASHER
AN960C416L WASHER
(TYP 4 PLACES)



DETAIL L
(SCALE 1:5)

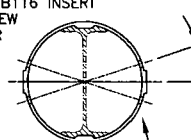


SECTION I-I
(SCALE 1:4)



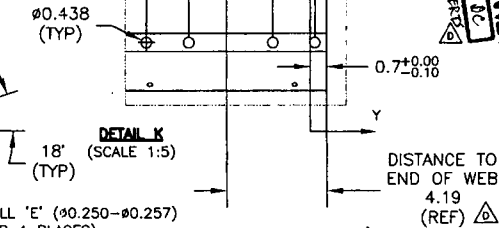
SECTION M-M
(SCALE 1:4)

DRILL 'E' (#0.250-#0.257)
C'SINK (#0.391X100')
INSTALL NAS1330S3KB116 INSERT
MS27039C1-09 SCREW
NAS1515H3L WASHER
AN960C10L WASHER
(TYP 4 PLACES)

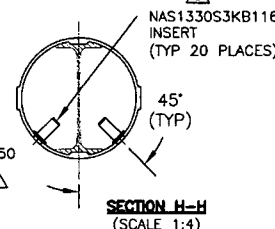


SECTION II-II
(SCALE 1:4)

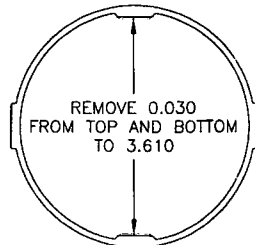
DRILL 'E' (#0.250-#0.257)
(TYP 4 PLACES)



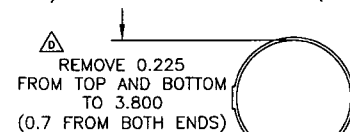
DETAIL K
(SCALE 1:5)



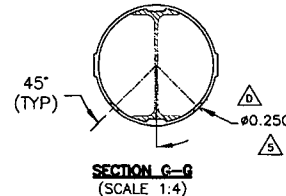
SECTION H-H
(SCALE 1:4)



SECTION X-X
(SCALE 1:2)



SECTION Y-Y
(SCALE 1:4)



SECTION G-G
(SCALE 1:4)

D3391-013/-023 MID TUBE ASSEMBLY PARTS LIST

QTY - 013	QTY - 023	PART NUMBER	DESCRIPTION
X		D3391-013	MID TUBE ASSEMBLY
	X	D3391-023	MID TUBE ASSEMBLY
1	1	D2500-1-100	EXTRUSION
1	1	D3389-1	WEB
24	20	NAS1330S3KB116	INSERT (OR NAS1330C3KB116)
24	10	NAS1330S3KB166	INSERT (OR NAS1330C3KB166)
4		NAS1329S4KB140	INSERT (OR NAS1329C3KB140)
4		NAS1515H3L	WASHER
4		AN960C10L	WASHER
4		NAS1515H4L	WASHER
4		AN960C416L	WASHER
4		MS27039C1-09	SCREW
4		MS27039C4-08	SCREW

D3391-013/-023 MID TUBE ASSEMBLY

- MATERIAL: MAKE FROM D2500-1-100 EXTRUSION
- INSTALL D3389-1 WEB TO OUTER TUBE USING SIKAFLEX-241/-291 PER QSI 015

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DESIGN
CHECKED
DATE
07.01.18

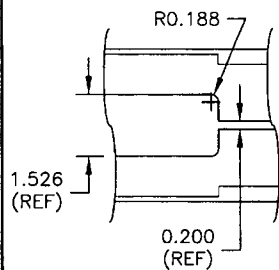
DRAWN BY
APPROVED
TITLE
412 FLOAT SKIDTUBE

DART DART AEROSPACE USA, INC.
PORT HADLOCK, WA

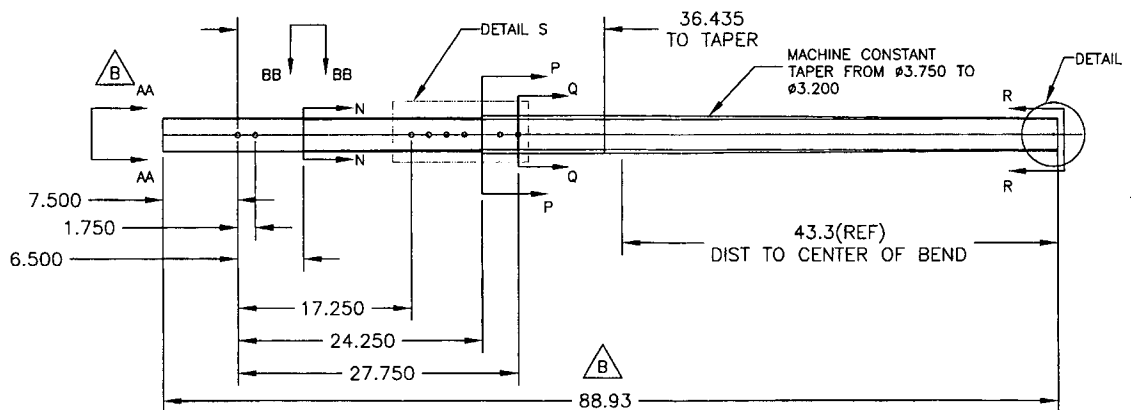
DRAWING NO.
D3391
SHEET 3 OF 5
SCALE
1:20

RELEASED
07.05.13 RH
DET ELM #934

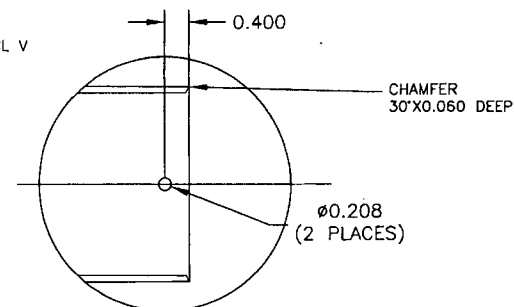
UNDER REVIEW
01.07.30 DC
CHANGING INSERTS



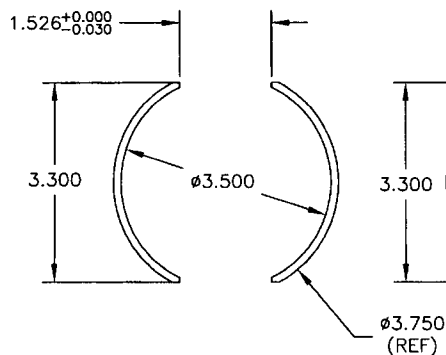
VIEW BB-BB
(SCALE 1:3)



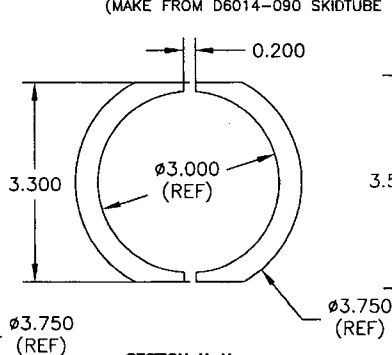
D3391-3 AFT DRILLING AND CUTTING DETAIL
(MAKE FROM D6014-090 SKIDTUBE MATERIAL)



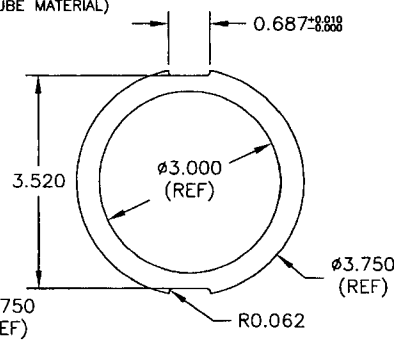
DETAIL V
(SCALE 1:2)



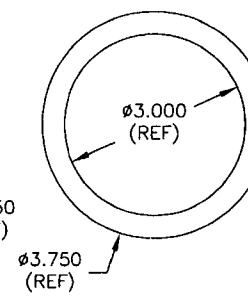
SECTION AA-AA
(SCALE 1:2)



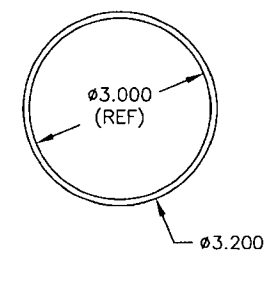
SECTION N-N
(SCALE 1:2)



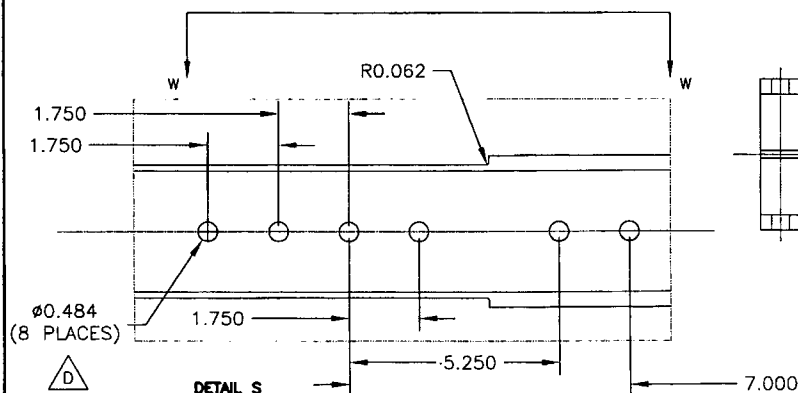
SECTION P-P
(SCALE 1:2)



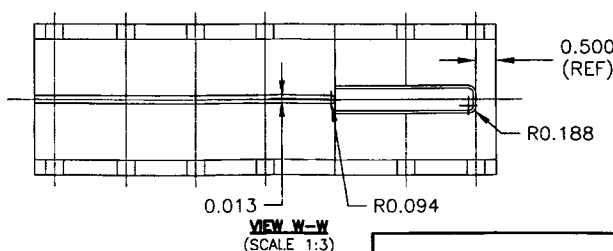
SECTION Q-Q
(SCALE 1:2)



SECTION R-R
(SCALE 1:2)



DETAIL S
(SCALE 1:3)



VIEW W-W
(SCALE 1:3)

UNDER REVIEW
07.07.30 DC
CHANGING INSERTS

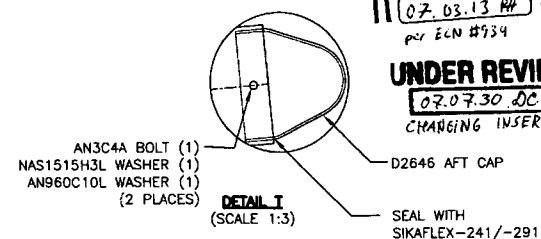
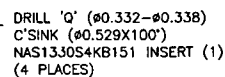
RELEASED
07.05.13 PH
PFC ECU #934

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DESIGN PH	DRAWN BY PH	DART DART AEROSPACE USA, INC. PORT HADLOCK, WA
CHECKED H	APPROVED H	DRAWING NO. D3391
DATE 07.01.18	TITLE 412 FLOAT SKIDTUBE	REV. F SHEET 4 OF 5 SCALE 1:12



QTY - 015	QTY - 025	PART NUMBER	DESCRIPTION
X		D3391-015	AFT TUBE ASSEMBLY
	X	D3391-025	AFT TUBE ASSEMBLY
1	1	D6014-090	AFT TUBE
1	1	D2646	AFT CAP
1	1	D3537-1	WEARPAD
1	1	D3537-7	WEARPAD
1	1	D3553-1	GASKET
1	1	D3553-3	GASKET
18	14	NAS1330S3KB366	INSERT (OR AES10KB366)
4	2	NAS1330S3KB316	INSERT (OR NAS1330C3KB316)
8	6	NAS1330S3KB266	INSERT (OR NAS1330C3KB266)
4		NAS1330S3KB816	INSERT (OR NAS1330C3KB816)
16	12	NAS1330S3KB166	INSERT (OR NAS1330C3KB166)
4		NAS1330S4KB151	INSERT (OR NAS1330C4KB151)
6	6	AN3CA4	BOLT
4	4	AN3CSA	BOLT
2	2	NAS1515H3L	WASHER
10	10	AN960C10L	WASHER



HOLES MARKED	QTY D3391-015	QTY D3391-025	C'SINK	P/N
CS1	18	14	Ø0.425	NAS1330S3KB366
CS2	4		Ø0.391	NAS1330S3KB366
CS3	4	2	Ø0.391	NAS1330S3KB316
CS4	8	6	Ø0.391	NAS1330S3KB266
CS5	4		Ø0.391	NAS1330S3KB216
CS6	16	12	Ø0.391	NAS1330S3KB166

DESIGN 04	DRAWN BY 04	DART DART AEROSPACE USA, INC. PORT MADDOCK, WA	
CHECKED H	APPROVED H	DRAWING NO. D3391	REV. F SHEET 5 OF 5
DATE 07.01.18		TITLE 412 FLOAT SKIDTUBE	SCALE 1:12

RELEASED
07.03.13 RH
per EGN #934
UNDER REVIEW
07.07.30 DC
CHANGING INSERTS